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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,127	03/02/2004	Chin-Shiong Tsai	DEE-PT155	2651
3624	7590	05/04/2005	EXAMINER	
VOLPE AND KOENIG, P.C. UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			SMITH, TYRONE W	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,127

Applicant(s)

TSAI ET AL.

Examiner

Tyrone W. Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 6, 7 and 11 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 11 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: In claim 1 and 18, where the limitation states "current command reference signal and a current feedback signal in order to drive said servo system." It appears that the use of the current command reference signal and the current feedback signal does not express any essential steps taken to generate a control signal. It appears to the Examiner that the current command signal, current command reference signal and the current feedback signal is provided to the controller, this is not expressed in the claims if true. In essence, Examiner requests clarification of claims 1 and 18.

Claims 6 and 7 recites the limitation "wherein J_m and B_m of said transfer function, $K_t / (J_m s + B_m)$, are according to a default of a specification." And "wherein said specification is a steady-state error of said servo system" in lines 20-23 of page 8. There is insufficient antecedent basis for this limitation in the claim.

Examiner notes to Applicant that claims (2-5, 8-10 and 12-18) dependent of rejection claims (1, 6, 7 and 11) are also rejected based on 35 U.S.C. 112 second paragraph.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-18 rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto et al (EP0329769).

Regarding Claims 1, 8, 11 and 16. Sakamoto discloses a servo motor controller, which includes a reference model (Figure 1 item 2; $d Kt/Jm$) generating a velocity command from a current command (Figure 1 item $T(s)$) of the servo system and generating a current command signal (Figure 1 item $A(s)$) through comparing the velocity command signal with a feedback velocity command signal (Figure 1 items 1 and 6) of the servo system; and a current controller (Figure 1 item c) generating a control signal from a current command signal (Figure 1 items $A(s)$). Refer to column 3 lines 22-58 and column 4 lines 1-56.

Regarding Claims 2, 3, 12 and 13. Sakamoto discloses a servo motor controller system that is either an AC servo system and/or a permanent magnet servo system (Figure 1). Refer to abstract, column 1 lines 1-40, column 3 lines 22-58 and column 4

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lines 1-56. Examiner notes that AC servo motor systems and permanent magnet systems are common in the motor control art.

Regarding Claims 4, 6, 7, and 14. Sakamoto uses a transfer function of the reference controller where $K_t / (J_m s + B_m)$ in which J_m (rotor inertia of the motor), B_m (damping coefficient) and K_t (a ratio) is provided. Refer to column 3 lines 22-58 and column 4 lines 1-56.

Regarding Claims 5 and 15. Sakamoto discloses a rotor inertia control, which is changed according to a load of said servo system, is controlled by the model reference controller (Figure 1 item 2 to be approximate to the reference of the rotor inertia of the motor. Refer to column 3 lines 22-58 and column 4 lines 1-56.

Regarding Claims 9, 10, 17 and 18. Sakamoto sends to the motor a voltage/current signal. Refer column 1 lines 44-55 and column 2 lines 1-14. Sakamoto discloses a servo motor controller system that is either an AC servo system and/or a permanent magnet servo system (Figure 1). Refer to abstract, column 1 lines 1-40, column 3 lines 22-58 and column 4 lines 1-56. Examiner notes that AC servo motor systems and permanent magnet systems are common in the motor control art.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent art related to the current invention of servo motor controlled systems is disclose in the PTO-892.

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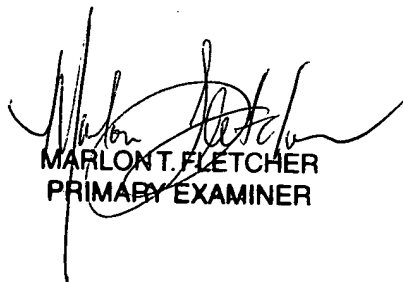
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tyrone W. Smith whose telephone number is 571-272-2075. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin, can be reached on 571-272-2800 ext. 37. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tyrone Smith
Patent Examiner

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MARLONT FLETCHER
PRIMARY EXAMINER